



PRODUCT TESTING SERVICE

100 Clemson Research Blvd. ■ Anderson, SC 29625 ■ Tel (864) 646-TILE ■ Fax (864) 646-2821

November 4, 2015

Laticrete International
Attn: Jay Conrod
One Laticrete Park North
Bethany, CT 06524-3423

Dear Mr. Conrod,

Tile Council of North America has tested the samples you submitted. Test report TCNA-562-15 is enclosed. If you have any questions or concerns, please contact us.

Best Regards,

TILE COUNCIL OF NORTH AMERICA, INC.

Katelyn Simpson
Laboratory Manager
Enclosures



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TCNA TEST REPORT NUMBER: TCNA-562-15 #1

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TEST REQUESTED BY: Laticrete International Inc.

TEST SUBJECT MATERIAL: Identified by client as: "Fracture Ban™ 90"

TEST DATE: October 21- 22, 2015

TEST PROCEDURE: ASTM C627: "A Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester"

TEST AND MATERIAL DESCRIPTION:

As per the client's request, the following materials were used for the preparation of the testing pad.

Material Description			
Item #	Product name and size	Product Code	Provided By:
1	Concrete base with a smooth finish Nominal Size: 48" x 48" x 2" (1219 mm x 1219 mm x 51 mm)	N/A	TCNA
2	Fracture Ban™ Primer	Item #0178-0005-2	Laticrete International Inc.
3	Fracture Ban™ 90	Item #0178-0090-2	Laticrete International Inc.
4	Laticrete 253 Gold thin-set mortar	7700-015 0253-0050-21	Laticrete International Inc.
5	12" x 12" x 0.375" Crossville porcelain tiles	A825	TCNA
6	Laticrete Permacolor grout	02778 05781-001 2559-0025-2	Laticrete International Inc

TYPE OF INSTALLATION:

All the materials used were specified by the client and the tested assembly was built per the client's instructions.

Base and Underlayment:

All underlayment installation was performed by a TCNA representative. The installation procedures are outlined below.

A 48" x 48" x 2" concrete base was prepared and cured for a minimum of 28 days prior to testing. The surface was swept cleaned and thoroughly dried prior to applying the underlayment.

Fracture Ban™ Primer was applied over the concrete subfloor with a nap roller. The Fracture Ban™ 90 was cut into two pieces (48" x 9" and 48" x 39") and laid into the wet primer with a butted joint (no overlap). The membrane was rolled with an 85 pound roller and smoothed with a wooden float. The system was allowed to cure for 24 prior to the installation of the tiles.

Tile preparation:

The porcelain tiles were nominal size 12" x 12" x 3/8" and were installed in full pieces in the wheel path of the Robinson floor tester.

Testing Services: testing@tileusa.com ■ Literature Orders: literature@tileusa.com ■ Web Site: www.tcnatile.com

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Tile and Grout:

All tile installation and grouting was performed by a TCNA representative. The installation procedures are outlined below.

Laticrete 253 Gold thin-set mortar, mixed with water per client's instructions (mix ratio 22.9:100 by weight), was troweled over the membrane with a 1/4" x 3/8" square-notched trowel. The thin-set was first keyed in with the flat side of the trowel then combed with the notched side to form parallel ridges. The 12" x 12" Crossville porcelain tiles were set in the thin-set mortar by pressing down and sliding the tiles in a direction perpendicular to the combed ridges. Each tile was back buttered with a skim coat before setting. Once set, the system was allowed to cure for 24 hours before grouting.

Laticrete Permacolor grout, mixed with water per client's instructions (mix ratio 16.7:100 by weight), was forced into the 1/4" grout joints with a rubber float. Excess grout was removed with the edge of the float. The grout was allowed to set up for approximately 20 minutes before the installation was cleaned with a sponge and water. The grouted installation was subsequently allowed to cure for 28 days.

TEST RESULTS:

The installation completed twelve cycles with no evidence of damage to the tiles or grout joints. At the completion of cycle thirteen (steel wheels, two hundred fifty pounds per wheel), there was one chipped tile. At the completion of cycle fourteen (steel wheels, three hundred pounds per wheel), there was one broken tile and three additional chipped tiles. All evaluation criteria were based on 8 tiles and 8 grout joints in the wheel path of the Robinson-Type Floor Tester.

CONCLUSION:

In accordance with the Performance-Level Requirement Guide and Selection Table of the 2015 *TCNA Handbook for Ceramic, Glass, and Stone Tile Installation* (page 41), the test pad reached the "HEAVY" classification.

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IMAGES OF TESTED SAMPLE:

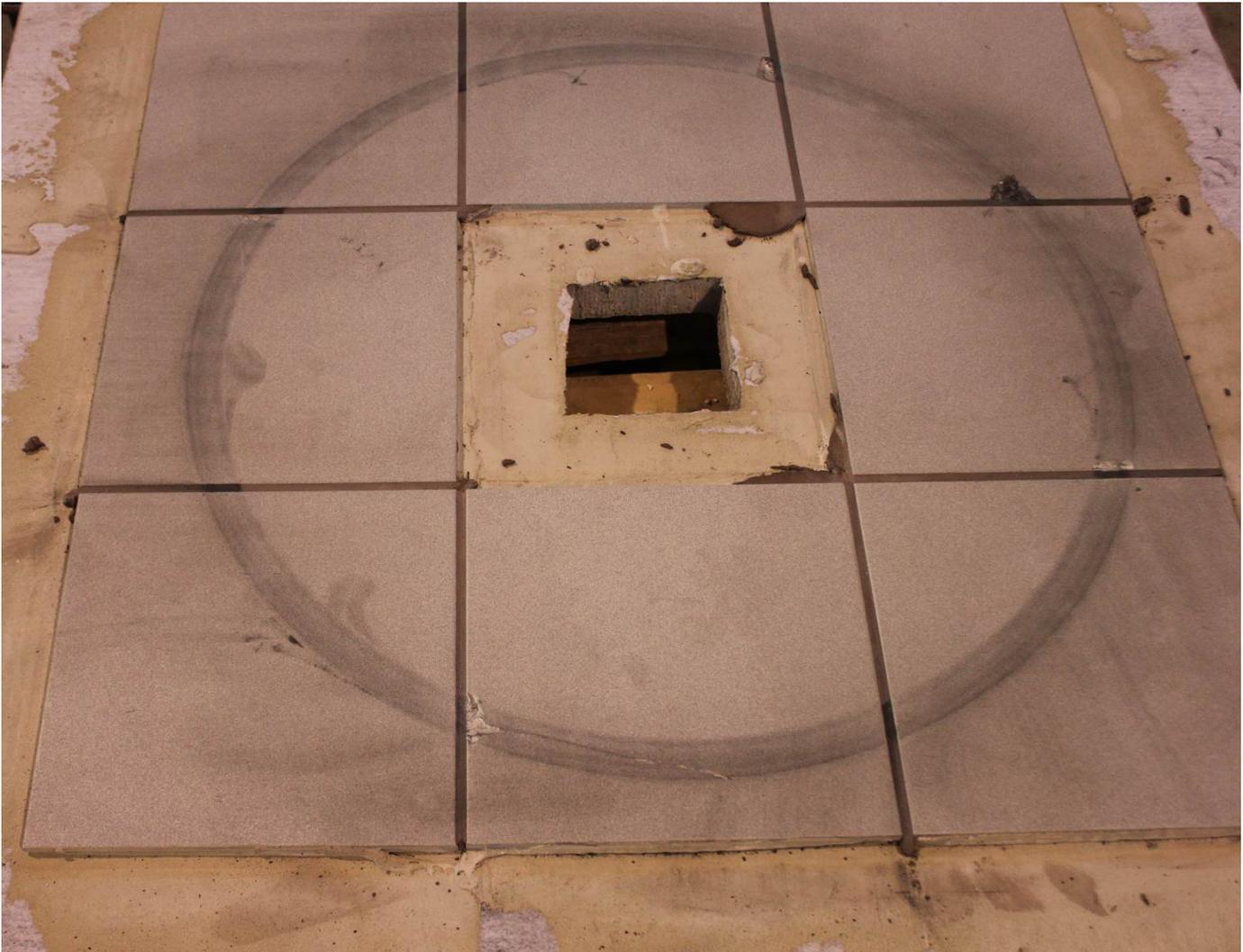


Image 1: Full assembly after testing



Image 2: Chipped tile

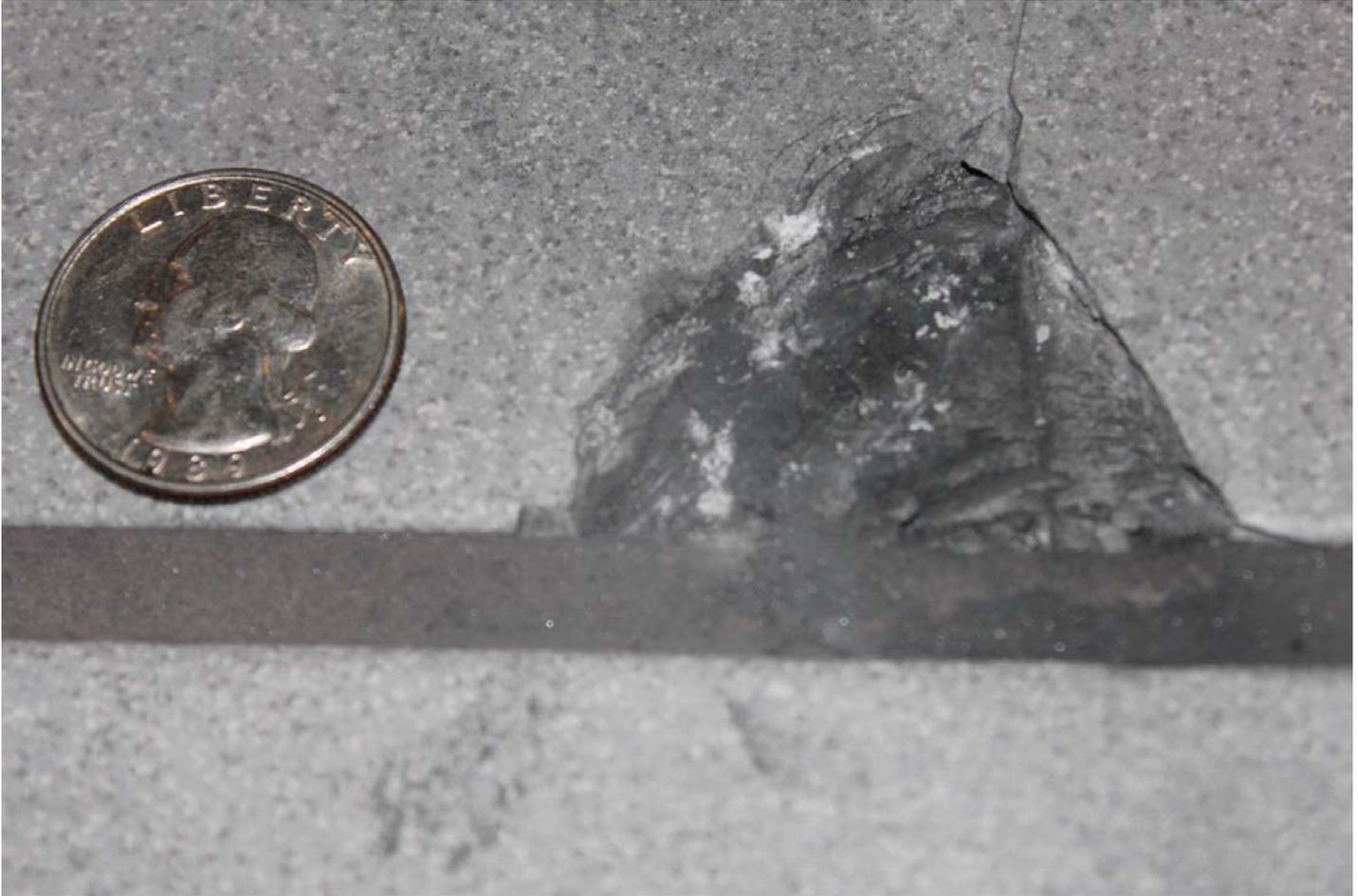


Image 3: Broken tile



Image 4: Chipped tile

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11/4/15